SITE: Everglades Fertilizer
BREAK: 1.8
OTHER: V. 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MEMORANDUM

Date: February 17, 2004

Subject: Everglades Fertilizer Plant Site
Ft. Lauderdale, Florida FLD984172163
Review of Preremedial Package for Reassessment

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A review of the preremedial package for Site Reassessment was accomplished. The Site is actually less than two of acres of property which was a former commercial enterprise packaging and selling fertilizers and pesticides. Most of the buildings burned down in 1969 and what was left was razed without a documented cleanup. Fertilizers and pesticides were apparently buried in place after the fire damage was assessed. The acreage has since been covered with 10 to 15 feet of compacted fill and an access ramp for Interstate 95 was built over a portion of the acreage. An environmental evaluation, including sampling of soils and ground water, was done prior to the construction of the ramp roadway. Soil samples contained elevated levels of creosotic compounds and pesticides. Ground water samples contained elevated levels of heavy metals and pesticide-associated organics.

Highlights:

1. Soil excavation and disposal/treatment may be the only viable cleanup alternative. However, the contaminated soils are under an access ramp of Interstate 95 and excavation would interrupt traffic along a main commuter route for the Ft. Lauderdale area. Destruction and reconstruction of the access ramp may be necessary.

2. GW treatment at the Site is not viable. GW should be treated at the nearest POTW with the treatment train being configured to handle the Site GW contaminants. Presumably this is already being done.

3. A PreScore of 50.0/100.0 based on GW contamination may be produced by application of the HRS.PreScore algorithms, but the score does not accurately depict the Site-specific hazard rating. The observed release of record was during the plant fire in 1969. Connection was made between the contaminants found during the environmental assessment for the ramp construction in the early 1990's and the chemicals which may have been found at the plant much earlier. Cores also produced direct evidence of fertilizer (i.e., manure) at depth.

4. There is an attribution issue with regard to GW contaminants. Other sources of creosotic and insecticide contamination of GW may exist in the immediate area and contamination from them would tend to quickly mix with the rather rapidly moving GW of the Biscayne Aquifer. Contamination of GW through chemical treatment of local buildings and lawns would tend to mask contamination from the Site.

5. The prevalence of cancer among local firefighters may be due to exposures during the plant fire in Jan. 1969, but may also be due to the inadequate safety equipment used in all firefighting efforts at that time, i.e., no SCBAs, no regular use of masks with carbon cartridges, inadequate fire/smoke-proof clothing. The plant fire occurred before the USEPA (1970), OSHA (1971), and the FLDER (now the FDEP) were officially organized so there was very little or no enforcement of environmental standards and worker safety requirements.

6. The Site is between 2 and 3 miles from the nearest Wellfield Protection Area (WPA).

7. The only known release was when the firefighters flushed burning buildings with water in Jan. 1969. Some anecdotal evidence of pre-fire spills of insecticides and fertilizer components exists. The PreScore results were based upon tying the possible environmental effects of plant firefighting efforts with the sampling and analysis efforts immediately prior to the building of the Interstate ramp (The Westinghouse Remediation Services "Impact to Construction Assessment" was done for the Florida DOT in 1992.) .

Recommendations:

The presence of elevated contaminant levels in subsurface soils under the roadway of the Interstate 95 ramp does not in itself indicate a significant threat to ground water in the area as is depicted by the PreScore. The metals from CCA-processed lumber appear in both subsurface soils and to a lesser degree in ground water. No off-site background samples were taken (See pages 10 and 11 of the Reassessment Report.). However, the plant fire occurred in 1969 and the ramp pre-construction report with sampling and analysis was done in 1991-1992:

approximately 22 years between the stated observed release and the detection of contaminants in subsurface soils and ground water. Given the hydrogeology of the Biscayne Aquifer and the densely populated surrounding areas of Ft. Lauderdale, the ground water is in all likelihood already significantly impacted to the point where background ground water would have similar contaminants in it. If additional Site environmental investigations were done, a better picture could be had of how the Site contamination may stand out against the background of existing area-wide ground water contamination which is for the most part a product of dense development and long-term residential and commercial land-use. However, it is reasonable to conclude that the same metals and pesticide-associated chemicals found at the Site would be found in the subsurface soils and ground water surrounding the Site given the high transmissivity of the Biscayne Aquifer, the need for regular residential and commercial pesticide application, the heavy total rainfall along the Florida coast, and the known sewage control problems in these low-lying areas.

Because of cleanup cost-effectiveness and attribution issues, I recommend that Superfund Preremedial place this site in the NFRAP category as far as the USEPA is concerned. Further investigation and cleanup of the subsurface soils under the I-95 access ramp are more appropriately handled by the State. Ground water problems are area-wide and, unless particularly egregious, are best handled by existing or planned POTWs.